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ABSTRACT

A model for systematic data gathering and evaluation of programs in teacher education at Tennessee Technological University was developed in 1973. The objective was the evaluation and subsequent modification and improvement of the programs. During the eleventh year of the project, three groups of graduates (1981-83) who had completed either the B.S. or M.A., with major emphasis in the teaching field, participated in the study. Detailed information was collected on each subject by use of standardized and locally developed instruments. The first chapter of this report describes the purposes, limitations, and procedures of the study. In chapter II, comparisons are made of second and third year followup participants. Included are personal variables, principal's ratings, student evaluations, and data collected by independent observers. The third chapter presents an analysis of data for 1983 graduates and comparisons with 1981 and 1982 graduates. The final chapter contains a summary, conclusions, recommendations, and plans for the continuation of the study during 1984-85. Thirty-nine tables are included. (JD)

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STUDY OF THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

REPORT 84-1

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TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL - YEAR XI

AUGUST, 1984

TENNESSEE TECH UNIVERSITY

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Tennessee Technological University
College of Education
Cookeville, Tennessee

STUDY OF THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

REPORT 84-1

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL--YEAR XI

Report Prepared by:

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College of Education

August 1984

Tennessee Technological University

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Abstract

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL--YEAR XI

In 1973 Tennessee Technological University developed and implemented a model for systematic data gathering and for making evaluations of the programs in teacher education. The specific objective of the use of the longitudinal model was the evaluation and subsequent modification and improvement of the programs for the preparation of teachers. During the eleventh year (1983-84) of the operation of the project, three distinct groups of graduates who had completed either the B.S. or M.A., with major emphasis in a teaching field participated in the study. The sample size by year of graduation was as follows: 1981—14, 1982—24, and 1983—44. Detailed information was collected on each subject by use of standardized and locally developed instruments. The basic instruments have remained the same during the ten years of the operation of the model and included: (1) University records, (2) principals evaluations, (3) the California F-Scale, (4) a measure of the satisfaction of the students of the graduates, and (5) observation in the classrooms of the subjects by trained observers using Flanders Interaction Analysis, the Classroom Observation Record, and the Tuckman Teacher Feedback Form. Descriptive and comparative statistics were computed.

The major findings of the study for the first year subjects were similar to those reported in the past ten years of the study. Comparisons between the B.S. and M.A. graduates indicated few significant differences. However, the M.A. graduates appeared to be functioning at a higher level. Comparisons of 1983 graduates with those first year participants in 1981 and 1982 indicated few significant differences. Graduates in their second and third year of participation in the project appeared to be functioning at a higher level than first year graduates. Conclusions and recommendations were advanced from the results of the study that are being used to modify and improve the teacher education programs of the University.

Based on the results of the study and the applications that have been made, the model has become a permanent operational feature of the teacher education programs of the University. Plans are being made to modify the overall design of the model based on recent educational research on evaluation methodology and the characteristics of good teachers. Also, major funding is being sought for the establishment of a center on teacher education program evaluation at the University.

TABLE OF CONTENTS

Page

ABSTRACT..... iii

LIST OF TABLES..... vii

LIST OF FIGURES..... xi

PREFACE.....xiii

CHAPTER

I. INTRODUCTION AND PROCEDURES..... 1

Purposes..... 1
Limitations..... 2
Procedures..... 3
Summary..... 9
References..... 10

II. COMPARISONS OF SECOND AND THIRD YEAR FOLLOWUP PARTICIPANTS..... 11

Personal Variables..... 11
Principal's Ratings..... 12
Student Evaluations..... 14
Independent Observers..... 14
Discussion..... 19
Summary..... 20

III. PRESENTATION AND ANALYSES OF DATA FOR 1983 GRADUATES AND COMPARISONS WITH 1981 AND 1982 GRADUATES..... 21

Correlation Analyses..... 21
Comparison of B.S. and M.A. Graduates..... 25
Comparison of First Year B.S. Graduates 1981-83..... 33
Comparison of First Year M.A. Graduates 1981-83..... 37
Summary..... 38

IV. SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND FUTURE PLANS..... 43

Summary..... 43
Conclusions..... 44
Recommendations..... 45
Plans for Continuation of the Study During 1984-85..... 46
Long Range Plans..... 47

APPENDIX..... 49

LIST OF TABLES

Table		Page
1.	Number of Subjects By Year of Graduation Participating in Each Phase of Study	5
2.	Sample For Intensive Followup - 1983-84	5
3.	Comparison of Sample Sizes Across All Years of Study	6
4.	Number of Subjects By Date of Graduation and County in Which Teaching 1983-1984	8
5.	Comparison of NTE and F-Scale Scores For Second Year (1982) Elementary and Secondary B.S. and M.A. Graduates	12
6.	Comparison of Principal's Ratings of Third Year (1981) Elementary and Secondary Participants	13
7.	Comparison of Principal's Ratings For Second Year Participants by Degree and Teaching Level (Elementary or Secondary)	13
8.	Comparison of SET-I Scores for Second and Third Year M.A. Secondary Graduates	14
9.	Comparison of SET-II Scores for Second Year B.S. and M.A. and Third Year Elementary Graduates	15
10.	Comparison of Flanders Ratios For Second Year B.S. and M.A. and Third Year M.A. Elementary Graduates	16
11.	Comparison of Flanders Ratios For Second and Third Year M.A. Secondary Graduates	16
12.	Comparison of COR Factor Scores for Second Year B.S. and M.A. and Third Year M.A. Elementary Graduates	17
13.	Comparison of COR Factor Scores and Second and Third Year M.A. Secondary Graduates	17
14.	Comparison of Tuckman Ratings For Second Year B.S. and M.A. and Third Year M.A. Elementary Graduates	18
15.	Comparison of Tuckman Ratings For Second and Third Year M.A. Secondary Graduates	19
16.	Correlation Matrix For Selected Variables For 1983 B.S. Elementary Graduates (N=11)*	22
17.	Correlation Matrix For Selected Variables For 1983 M.A. Elementary Graduates (N=13)*	23

18. Correlation Matrix For Selected Variables For 1983 M.A. Secondary Graduates (N=12)*..... 24

19. Comparison of Mean ACT Composite Scores, and F-Scale Scores For 1983 B.S. and M.A. Graduates..... 25

20. Comparison of Mean Principal's Ratings For 1983 B.S. and M.A. Graduates..... 27

21. Comparison of Mean SET-I Scores For 1983 B.S. and M.A. Graduates..... 28

22. Comparison of Mean SET-II Scores For 1983 B.S. and M.A. Graduates..... 29

23. Comparison of Flanders Ratios For 1983 B.S. and M.A. Graduates..... 30

24. Comparison of Mean Tuckman Factor Scores For 1983 B.S. and M.A. Graduates..... 31

25. Comparison of Mean Tuckman Factor Scores For 1983 B.S. and M.A. Graduates..... 32

26. Comparison of ACT Composite and F-Scale Scores For First Year B.S. Graduates 1981-83..... 33

27. Comparison of Mean Principal's Ratings For First Year B.S. Graduates 1981-83..... 34

28. Comparison of Mean SET-I Scores For First Year B.S. Graduates 1981-83..... 34

29. Comparison of Mean SET-II Scores For First Year B.S. Graduates 1981-83..... 35

30. Comparison of Mean Flanders Ratios For First Year B.S. Graduates 1981-83..... 36

31. Comparison of Mean COR Scores For First Year B.S. Graduates 1981-83..... 36

32. Comparison of Mean Tuckman Scores For First Year B.S. Graduates 1981-83..... 37

33. Comparison of ACT Composite and F-Scale Scores For First Year M.A. Graduates 1981-83..... 38

34. Comparison of Mean Principal's Ratings For First Year M.A. Graduates 1981-83..... 39

35. Comparison of Mean SET-I Scores For First Year M.A. Graduates 1981-83..... 39

36. Comparison of Mean SET-II Scores For First Year M.A. Graduates 1981-83..... 40

37. Comparison of Mean Flanders Ratios For First Year M.A. Graduates 1981-83..... 40

38. Comparison of Mean COR Scores For First Year M.A. Graduates 1981-83..... 41

39. Comparison of Mean Tuckman Scores For First Year M.A. Graduates 1981-83..... 41

LIST OF FIGURES

Figure Page

1. PERT Chart of Major Activities for 1983-84..... 4

2. Number of Participants by County in 1983-84 Phase of the Study..... 7

PREFACE

Followup evaluation has been an integral part of the teacher education programs of Tennessee Technological University for the past 14 years. Followup studies of all graduates have been conducted on a regular basis and special studies have been carried out to provide input for the overall operation of the programs of the University. In 1973, a longitudinal model was developed and implemented for conducting followup evaluations. During 1983-84 this model was used for the eleventh year to gather data. The application of the model is believed to be one of the longest on-going teacher evaluation projects in the nation. The project has received national recognition as an exemplary program for teacher evaluation.

The purpose of this report was to present the findings of the eleventh year of the application of the model. The report is by no means complete, however, it serves to inform the reader of the basic procedures used and the preliminary findings of the eleventh year of the study. In order to conserve resources, only essential information was presented. Readers of the report are invited to pose additional research questions and to request additional data from the files of the project. Reports of the results of the application of the Tennessee Technological University Teacher Evaluation Model for the period 1973-74 through 1982-83 are available through the ERIC system or from the Office of the Associate Dean of the College of Education at Tennessee Technological University.

The author of this report is indebted to the efforts of several individuals that have been extensively involved in working with the project during the past year. These individuals include: Elizabeth B. Harnish and Treva Vaughn, graduate assistants; Patricia A. Eaves, secretary; and Sharon A. Heard, analyst. In addition thanks are extended to all principals, teachers, superintendents, and other school personnel that provided technical assistance, data, and allowed the project staff to work with them in various ways.

Jerry B. Ayers
Associate Dean
College of Education
August 1984

CHAPTER I

INTRODUCTION AND PROCEDURES

Beginning in 1970, a series of separate studies was begun related to the evaluation of students enrolled in and graduates of the teacher education programs of Tennessee Technological University. The research was systematic and designed to meet standards established by the National Council for the Accreditation of Teacher Education as well as to answer such questions as course effectiveness, the proper sequencing of courses, factors related to achievement, success of the graduates after entering the teaching profession, better methods of instruction, and the degree of achievement of the stated objectives of the teacher education program. It should be noted that there are companion studies designed to evaluate the programs for the preparation of school service personnel at the M.A. and Ed.S. levels. Currently these studies are being carried out by the Department of Administration, Supervision, and Curriculum and the Department of Educational Psychology and Counselor Education.

The works of Sandefur and Adams (1, 2, 3) led to the development of the Tennessee Technological University Teacher Evaluation Model. This model was employed to evaluate the graduates of the programs of the University designed to prepare teachers at the bachelor's and master's levels. During 1973-74 the Evaluation Model was implemented and operated through 1983-84 with funds available from the budget of the College of Education of the University. The results of the application of the model were summarized in a series of yearly reports (see Appendix, items 20, 27, 34, 37, 39, 45, 54, 59, 63, 69). These reports and others are available through the Office of the Associate Dean of the College of Education of Tennessee Technological University or through the ERIC System.

The eleventh year of the application of the Evaluation Model was initiated in the fall of 1983. The remainder of this chapter describes the purpose of the eleventh year of the operation of the model and limitations of and the procedures used in conducting the major parts of the study (see Appendix 62). Chapter II contains a summary of the analyses of selected data accumulated on graduates who were participants in the project for the second and third year. Chapter III includes presentations and interpretations of the data collected as a result of a study of the 1983 graduates of the teacher education programs. Chapter IV contains a summary, conclusions, and recommendations and tentative plans for the twelfth year of the study to be conducted during 1984-85. The Appendix includes a list of all evaluative studies related to teacher education that have been conducted as a part of the efforts of the Office of the Associate Dean of the College of Education and through other units of the University.

Purposes

The purposes of the study reported in this document included the following:

1. To provide information for faculty and administrators concerned with teacher education programs at Tennessee Technological

University in making decisions pertinent to curriculum evaluation and development.

2. To aid in the process of making long-range plans for improving the total program of the University with particular emphasis on the teacher education program.

3. To continue the development and refinement of the Tennessee Technological University Teacher Evaluation Model.

Specific objectives to be accomplished as a part of this study were as follows:

1. To continue studying in a longitudinal manner those subjects who had previously participated in the application of the Model (1981-82 through 1982-83).

2. To provide a descriptive profile of a sample of 1983 B.S. and M.A. graduates of the teacher education programs of Tennessee Technological University.

3. To determine relationships among selected variables that were measured as a part of the total study.

4. To provide comparisons between the graduates of the teacher education programs of Tennessee Technological University with those who might be considered as effective teachers as defined in the literature of teacher education.

5. To disseminate relevant research data to the faculty and administration of the University.

6. To provide information for curriculum evaluation and development based on empirical research data.

7. To continue to evaluate the procedures employed in the study and to make long-range plans for modifications and refinement of the basic Evaluation Model.

Limitations

The general limitations for this study were primarily concerned with sampling techniques:

1. Subjects for the study were individuals who were 1983 graduates of a bachelor's or master's program at Tennessee Technological University designed to prepare themselves as teachers, or they were individuals who participated in the study during the period 1981-1982 through 1982-1983.

2. Subjects were teaching in the State of Tennessee within approximately a 75-mile radius of Cookeville, Tennessee. (Approximately 65 percent of all graduates of the teacher education programs of the University that were teaching

resided within the specified geographical limits of the study.)

3. The subjects volunteered to participate in the study.

4. The subjects who participated in the study received the permission of their principals and superintendents.

5. The sample sizes of the 1981 and 1982 graduates were reduced each year by about 50 percent due to attrition from the teaching profession or moving out of the geographical limits of the study. The number of individuals who have only the bachelor's degree is disproportionate in the total sample. Therefore, the findings of the study may be limited in their applicability to the population of graduates from the University and also other institutions.

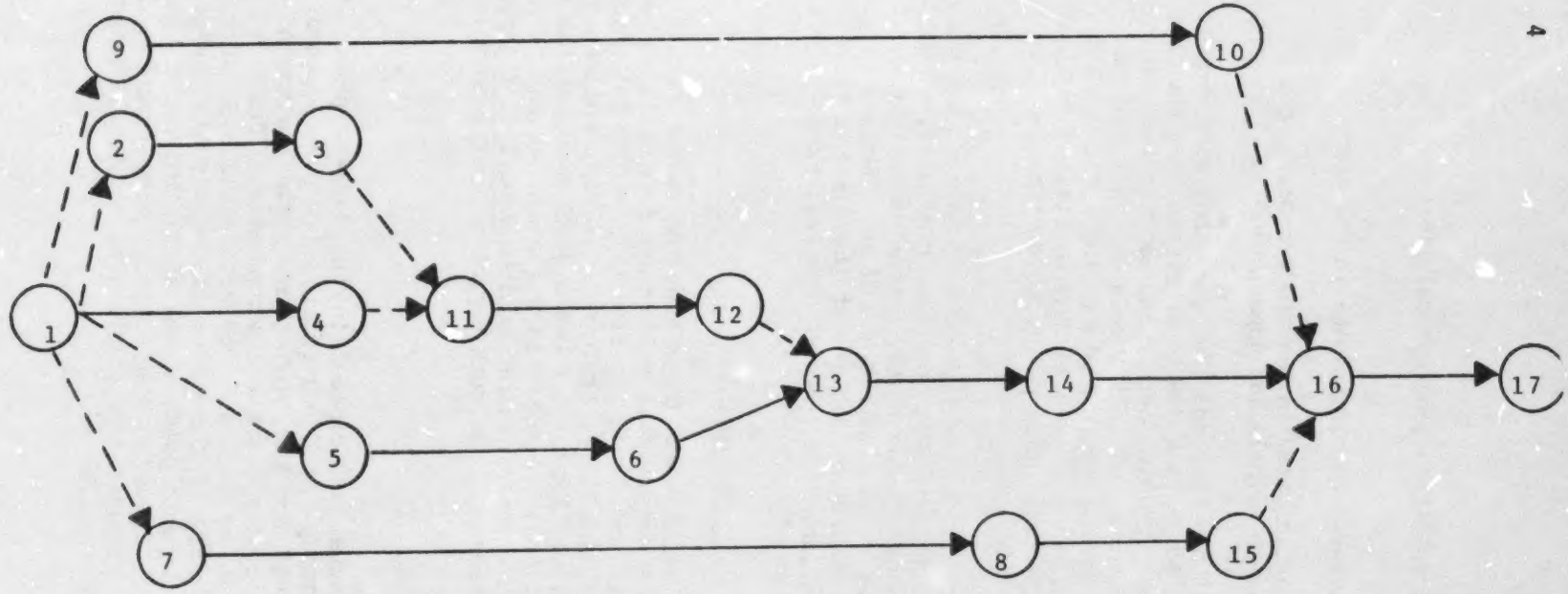
Limitations 1 through 4 above were imposed in order to make the study more feasible regarding the followup of the graduates. Voluntary participation was deemed necessary due to the extensive collection of data and completion of forms. The limitation of a 75-mile radius of Cookeville, Tennessee, was necessary because of the limited travel funds available and the time available for the research assistants to visit in the classrooms of the participating subjects.

Procedures

The purposes of this section was to provide the reader with a brief description of the procedures employed in collecting data utilized in this study. This section was concerned specifically with selection of subjects, implementation of the study, training of staff, and methods of data collection and analysis. Figure 1 shows a PERT chart of the major activities of the project from September 1983 through August 1984. In order to conserve space, the reader is referred to Report 82-1 (Appendix 62) for a more complete description of such topics as instrumentation and training of observers.

Selection of Subjects

Three groups of subjects participated in the 1983-84 phase of the project. The first group of individuals (1981 graduates) was participating in the project for the third year, while the second group (1982 graduates) was participating for the second year. The third group consisted of those individuals that received either the B.S. or M.A. in 1983. Table 1 shows a summary of the number of individuals (by year of graduation) participating in each phase of the study, and Table 2 shows a summary of the grade level in which the subjects were teaching during 1983-84. Table 3 shows a comparison of sample size across all years from which actual usable data were collected.



Summary of Activities

1-4 Finalize Plans for Visiting Subjects in 1981 and 1982 Phases of Study	11-12 Make School Visits on 1981 & 1982 Graduates
2-3 Training of Observers	6-13 Select Sample of 1983 Graduates for Study as Part of Followup
5-6 Survey all 1983 Graduates	13-14 Make School Visists on 1983 Graduat
7-8 Conduct Related Studies	8-15 Prepare Reports of Related Studies
9-10 Maintain Contact With Other Projects and Survey New Literature	14-16 Complete Report on Main Study
	16-17 Make Plans for 12th Year of Followu

Figure 1. PERT Chart of Major Activities for 1983-84.

Table 1

NUMBER OF SUBJECTS BY YEAR OF GRADUATION PARTICIPATING IN EACH PHASE OF STUDY

Phase of Study	1981	1982	1983	Total
1981-1982	35/12	--	--	35/12*
1982-1983	22/3	29/18	--	51/18
1983-1984	14/0	16/8	26/16	56/24

*No. M.A./No. B.S.

Table 2

SAMPLE FOR INTENSIVE FOLLOWUP - 1983-84

Year	K	1-3	4-7	8-12**	SPED	Total
1981	0/0	3/0	2/0	7/0	2/0	14/0
1982	2/0	3/2	2/2	7/2	2/2	16/8
1983	3/1	2/4	9/5	10/5	2/1	26/16
Total	5/1	8/6	13/7	24/7	6/3	56/24

*No. M.A./No. B.S.
**Teaching areas: 5-Health and Physical Education, 6-Mathematics, 4-Science, 4-Music, 5-Vocational Subjects, 4-English, 3-Social Sciences.

Table 3

COMPARISON OF SAMPLE SIZES ACROSS ALL YEARS OF STUDY

Year of Graduation	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
1973	57	35	27	21	15	—	—	—	—	—	—
1974	—	48	26	22	14	9	—	—	—	—	—
1975	—	—	44	23	17	11	5	—	—	—	—
1976	—	—	—	26	16	11	6	—	—	—	—
1977	—	—	—	—	50	26	19	10	—	—	—
1978	—	—	—	—	—	45	22	12	—	—	—
1979	—	—	—	—	—	—	61	33	13	—	—
1980	—	—	—	—	—	—	—	57	27	19	—
1981	—	—	—	—	—	—	—	—	47	25	14
1982	—	—	—	—	—	—	—	—	—	47	24
1983	—	—	—	—	—	—	—	—	—	—	42
Total	57	83	97	92	112	102	113	112	87	91	80

As a part of the routine followup activities of the Office of the Associate Dean, all 1983 graduates of the teacher education programs were contacted in the late fall of 1983 (165 B.S. graduates who were eligible for a teaching certificate and 113 M.A. graduates). As a result of this initial survey (Appendix 70), all graduates who were teaching within the defined geographical limits of the project were contacted by telephone and asked to participate in the study. A total of 16 B.S. and 26 M.A. graduates volunteered to participate (see Tables 1 and 2).

Figure 2 shows a map of selected portions of Tennessee. The numerals within each county indicate the number of individuals who participated in the study during the 1983-84 phase of the study. Table 4 shows a summary of the number of individuals by year of graduation participating from each county.

Instrumentation

Instrumentation for the 1983-84 phase of the study was identical to

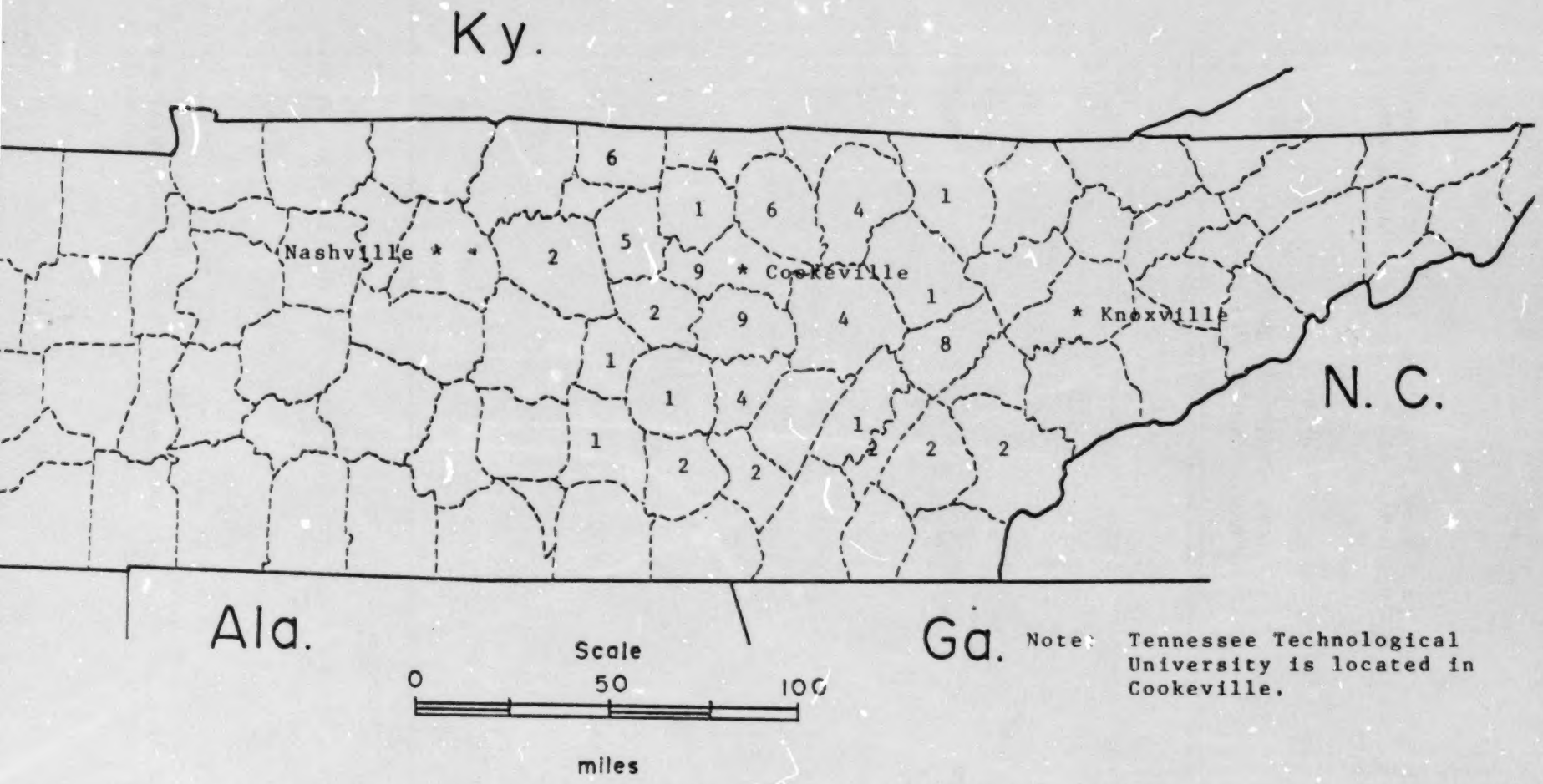


Figure 2. Number of Participants by County in 1983-84 Phase of the Study.

that used during the past several years of the project. The reader is referred to Report 82-1 (Appendix 62) for more information with regard to instrumentation.

Table 4

NUMBER OF SUBJECTS BY DATE OF GRADUATION AND COUNTY IN WHICH TEACHING 1983-1984

County	1981	1982	1983	Total
Cannon	0	0	1	1
Clay	0	1	3	4
Coffee	0	0	1	1
Cumberland	1	3	0	4
DeKalb	1	1	0	2
Fentress	0	2	2	4
Grundy	1	1	0	2
Jackson	0	0	1	1
McMinn	1	0	1	2
Macon	2	1	3	6
Meigs	1	0	1	2
Monroe	0	1	1	2
Morgan	0	1	0	1
Overton	1	0	5	6
Putnam	2	5	2	9
Rhea	0	0	1	1
Roane	1	2	5	8
Scott	0	0	1	1
Sequatchie	0	0	2	2
Smith	1	1	3	5
Van Buren	0	0	4	4
Warren	1	0	0	1
White	1	4	4	9
Wilson	0	1	1	2
Total	14	24	42	80

Training of Observers

The procedures for the training of observers were outlined in detail in Report 82-1 (Appendix 62).

Collection of Data

Data for this study were collected by mail surveys, interviews, and observations in the classrooms of graduates. Initially, all subjects were contacted by mail and dates were set for observational visits by the graduate research assistants (both previous subjects and new subjects in

the study). These dates were verified with the appropriate administrative authorities in each school and school system. A letter explaining the project in detail was sent to all subjects, principals, and superintendents. The subjects, their principals, and superintendents were invited to make comments and suggestions for conducting the study.

Each subject was visited on at least one occasion by a trained (observer) graduate assistant. The observer spent approximately a half day in each subject's classroom and completed from two to six 20-minute periods of observation using a ten category system of interaction analysis. At the completion of all observations, the Classroom Observation Record and the Tuckman Teacher Feedback Form were completed.

The Student Evaluation of Teaching (SET-I) was administered to the students of teachers in grades 4 through 12. The Student Evaluation of Teacher (SET-II) was administered to students of subject's in grades K-3. While the students were completing the appropriate version of the SET, subjects who were participating in the project for the first year completed the California F-Scale.

The observer interviewed each graduate with regard to his\her opinions and ideas about the teacher preparation program of the University. Also, the observer asked each principal to complete the Teacher Evaluation by Supervisor form.

Pertinent data such as quality point average, National Teacher Examination scores, etc. were collected from the permanent records of all 1983 graduates (see Report 82-1 for more details relative to the collection of data).

Analyses of Data

Basic descriptive and inferential statistical methods were used to analyze the data. The statistical techniques were described in more detail at the appropriate points in this report.

Summary

In summary, this chapter contains a brief overview of the total operation of the 1983-84 phase of the longitudinal study of the graduates of the teacher education programs of Tennessee Technological University. Included in this chapter was a summary statement of the major purposes of the project, limitations of the study, and major procedures employed in conducting the project. Data from the graduates were gathered from four major sources including self or personal, from supervisors and principals, students of the graduates, and by independent observers. Included in the chapter was a listing of the major instruments used in gathering data from the four primary sources. The major purposes and procedures of the project have remained virtually unchanged over the eleven years of study. It was felt the information available from this report, the companion reports completed during the period 1974 through 1983, and Report 83-3 would be useful to those individuals attempting to replicate this study. It should be noted that additional information and specifics related to methodology

employed in this study were available from the Office of the Associate Dean of the College of Education.

References

1. Sandefur, J.T. An Illustrated Model for the Evaluation of Teacher Education Graduates, Washington: American Association of Colleges for Teacher Education, 1970.

2. Adams, Ronald D. Western Kentucky University's Teacher Preparation Evaluation Model, Phase I, Cycle I. Annual Report. Bowling Green, KY: Office of Educational Research, Western Kentucky University, 1972.

3. Sandefur, J.T. and Ronald D. Adams. "An Evaluation of Teaching: An Interim Research Report," Journal of Teacher Education, 27 (1): 71-6, Spring 1976.

CHAPTER II

COMPARISONS OF SECOND AND THIRD YEAR FOLLOWUP PARTICIPANTS

The Tennessee Technological University Teacher Evaluation Model, was designed to be used to gather data about graduates for up to five years. From 1973 through 1978 this pattern was followed. However, beginning in 1979, data were collected for only three years because of financial limitations on the project and the lack of ability to interpret and use the data fully. The purpose of this chapter was to show some qualitative comparisons of data for second and third participants in the project. It will be noted that the sample sizes in some cases were small and there were no bachelor's level graduates in the 1981 group of participants. However, it is felt that the reader can gain some general ideas about the graduates of the University after they have been teaching for two or three years after receiving their last degree.

In order to simplify the tables the reader should keep in mind the following:

1. 2nd year refers to those 1982 graduates who were participating in the project for the second year.

2. 3rd year refers to those 1981 graduates who were participating in the project for the third year. All 1981 graduates had received the master's degree.

Personal Variables

Comparisons of personal variables were somewhat limited due to attrition from the followup study. The mean F-Scale score for third year master's participants (N=5) who were teaching at the secondary level was 116.3 (SD=1.7). In comparison the mean score for those individuals teaching at the elementary level was 112.9 (N=7, SD=17.7). The large standard deviation in the case of the elementary group was due to one low score. In general it appeared the individuals who remained in the study were those who were more authoritarian in their beliefs. This was evident in other years of the study. Attrition from the study made meaningful comparisons of National Teacher Examinations (NTE) scores impossible.

Table 5 shows the sample size, means, and standard deviation for the scores achieved by the second year graduates on the Weighted Commons Examination of the NTE and F-Scale scores. Those individuals with the master's degree achieved higher NTE scores than those with the bachelor's degree and, in general, those who were prepared to teach at the secondary level achieved higher NTE scores than those prepared to teach at the elementary level. Elementary teachers achieved lower mean scores on the F-Scale than secondary teachers. This finding was consistent with the results obtained in previous years of the study. Because of attrition from the study no accurate comparisons of the F-Scale scores were made between those with the master's and those with the bachelor's degree.

Table 5

COMPARISON OF NTE AND F-SCALE SCORES FOR SECOND YEAR (1982) ELEMENTARY AND SECONDARY B.S. AND M.A. GRADUATES

Test	B.S. Elem.			B.S. Sec.			M.A. Elem.			M.A. Sec.		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
NTE	4	591.0	62.5	6	524.7	83.7	3	541.0	38.3	2	622.0	9.0
F-Scale	3	105.0	24.9	12	98.3	17.9	1	98.0	----	4	112.0	21.7

Principal's Ratings

In general principal ratings of third year participants in the followup study were higher than for second year participants. Even though the sample sizes were small there was some indication principals had a tendency to rate teachers with more experience higher. Secondary teachers received higher ratings than elementary teachers and those who had received the master's degree were rated higher than those who had received only the bachelor's degree.

Table 6 shows a comparison of the mean principal ratings for the 3rd year elementary and secondary teachers. All of the participants in this phase of the study had completed the master's degree. Table 7 shows similar data for the 2nd year (1982 graduates) participants. The 2nd year participants included both B.S. and M.A. graduates teaching both the secondary and elementary levels.

Table 6

COMPARISON OF PRINCIPAL'S RATINGS OF THIRD YEAR (1981)
ELEMENTARY AND SECONDARY PARTICIPANTS

Factor	Elementary (N=7)		Secondary (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD
I Subject Matter Competence	4.9	0.3	4.5	0.5
II Relations with Students	4.9	0.3	4.6	0.5
III Appropriateness of Assignments	4.7	0.5	4.6	0.5
IV Overall Effectiveness	4.7	0.5	4.6	0.5

Table 7

COMPARISON OF PRINCIPAL'S RATINGS FOR SECOND YEAR PARTICIPANTS
BY DEGREE AND TEACHING LEVEL (ELEMENTARY OR SECONDARY)

Factor	B.S. Elem. (N=5)		B.S. Sec. (N=3)		M.A. Elem. (N=12)		M.A. Sec. (N=4)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Subject Matter Competence	4.0	0.9	4.5	0.5	4.3	0.7	5.0	0.0
II Relations with Students	4.2	0.9	5.0	0.0	4.6	0.5	4.4	0.5
III Appropriateness of Assignments	3.8	0.7	4.5	0.5	4.3	0.6	4.4	0.5
IV Overall Effectiveness	4.2	0.7	4.5	0.5	4.4	0.5	4.7	0.5

Student Evaluations

The SET-I was administered in the classrooms of graduates who were teaching in grades 4 and above. Because of the small sample sizes, it was not possible to make many meaningful comparisons for either the B.S. or M.A. graduates. The data were therefore omitted from this report. Table 8 shows a comparison between the second and third year graduates who were teaching at the secondary level. In general the third year teachers were perceived in a more favorable light than second year teachers. Experience may be a contributing factor to the higher composite ratings given the third year participants.

Table 9 shows a comparison of the use of the SET-II in the classrooms of teachers below the 4th grade. The small sample sizes made it difficult to make meaningful interpretations of the data. Advanced education and experience appeared to make a difference in the level of the ratings given the subjects in the study.

Independent Observers

Data were collected by independent observers using three instruments. The remainder of this section was subdivided based on the particular instrument used to gather data.

Table 8

COMPARISON OF SET-I SCORES FOR SECOND AND THIRD YEAR M.A. SECONDARY GRADUATES

	Factor	2nd Year (N=4) $\bar{X}$	2nd Year (N=4) SD	3rd Year (N=6) $\bar{X}$	3rd Year (N=6) SD
I	Friendly and Cheerful	335.7	39.2	360.0	21.4
II	Knowledgeable and Poised	365.0	37.4	347.2	16.1
III	Lively and Interesting	299.5	37.1	305.3	57.2
IV	Firm Control (Discipline)	293.3	22.5	323.1	27.0
V	Non-Directive (Dem. Process)	268.5	42.3	256.0	66.2
	Composite Score	312.2	14.1	320.3	26.3

Table 9

COMPARISON OF SET-II SCORES FOR SECOND YEAR B.S. AND M.A. AND THIRD YEAR ELEMENTARY GRADUATES

Factor		2nd Year B.S. (N=4)		2nd Year M.A. (N=6)		3rd Year M.A. (N= 5)	
		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	Rapport	5.3	0.4	5.4	0.6	5.2	0.2
II	Interactional Competence	4.7	0.4	4.6	0.2	4.3	0.3
III	Stimulating Interactive Style (I + II)	10.3	1.2	10.1	0.7	9.5	0.5
IV	Unreasonable Negativity	8.2	3.6	6.7	1.9	8.2	0.5
V	Fosterance of Self-Esteem	6.5	0.5	6.8	0.4	6.6	0.5

Flanders Interaction Analysis

The mean values of five ratios derived from the use of Flanders Interaction Analysis in the classrooms of B.S. and M.A. graduates teaching in the elementary grades were shown in Table 10. Data were omitted from the third year bachelor's graduates because of attrition from the study. Corresponding data for the M.A. graduates teaching at the secondary level were shown in Table 11. The data were comparable to that presented in earlier years for graduates with similar backgrounds and experience in the classroom. In general it appeared third year graduates were using more indirect teaching techniques in their classrooms than second year graduates. Also, there appeared to be more student talk in the classrooms of the third year graduates. There were no patterns present in comparisons of the other ratios.

Table 10

COMPARISON OF FLANDERS RATIOS FOR SECOND YEAR B.S. AND M.A. AND THIRD YEAR M.A. ELEMENTARY GRADUATES

Ratio	2nd Yr. B.S. (N=5)		2nd Yr. M.A. (N=5)		3rd Yr. M.A. (N=8)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	0.70	0.21	0.34	0.55	0.86	0.24
i/d	0.37	0.20	0.27	0.56	0.62	0.70
ST/TT	0.61	0.10	0.18	0.54	0.72	0.34
Sil/Tot	0.49	0.20	0.15	0.28	0.37	0.19
Lec/Tot	0.20	0.10	0.21	0.34	0.40	0.09

Table 11

COMPARISON OF FLANDERS RATIOS FOR SECOND AND THIRD YEAR M.A. SECONDARY GRADUATES

	2nd Yr. M.A. (N=4)		3rd Yr. M.A. (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD
I/D	1.19	0.71	0.72	0.65
i/d	0.39	0.16	0.32	0.22
ST/TT	0.68	0.79	0.36	0.16
Sil/Tot	0.18	0.12	0.43	0.53
Lec/Tot	0.53	0.18	0.49	0.19

Classroom Observation Record

Mean scores derived from the use of the Classroom Observation Record (COR) in the classrooms of elementary teachers were shown in Table 12. Second year master's subjects were rated slightly higher than subjects in the other groups. There was no pattern to the ratings and basically no differences. Mean COR factor scores for M.A. graduates teaching at the secondary level were shown in Table 13. The differences were minor and not significant.

Table 12

COMPARISON OF COR FACTOR SCORES FOR SECOND YEAR B.S. AND M.A. AND THIRD YEAR M.A. ELEMENTARY GRADUATES

	2nd Yr. B.S. (N=5)		2nd Yr. M.A. (N=12)		3rd Yr. M.A. (N=8)	
Factor	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	40.2	3.9	42.9	4.7	37.1	9.5
II	62.4	9.8	62.3	8.8	56.5	11.7
III	19.8	2.0	21.2	2.3	21.0	4.4

Table 13

COMPARISON OF COR FACTOR SCORES AND SECOND AND THIRD YEAR M.A. SECONDARY GRADUATES

Factor	2nd Yr. M.A. (N=4)		3rd Yr. M.A. (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD
I	41.0	6.5	41.5	7.1
II	60.3	12.8	60.5	14.7
III	21.5	5.1	22.0	5.4

Tuckman Teacher Feedback Form

Table 14 shows the results of the use of the Tuckman Teacher Feedback Form (TTFF) in the Classroom of those graduates who were teaching in the elementary grades. Data from third year bachelor's graduates were omitted because of the sample size. Second year and third year master's graduates were rated higher than second year bachelor's graduates who were teaching in the elementary grades. An examination of the comparison of the mean ratings given master's graduates who were teaching at the secondary level were shown in Table 15. The slight differences were probably due to small sample sizes in the study. The results of the use of the TTFF were comparable with those obtained in other years of the application of the model.

Table 14

COMPARISON OF TUCKMAN RATINGS FOR SECOND YEAR B.S. AND M.A. AND THIRD YEAR M.A. ELEMENTARY GRADUATES

Factor	2nd Yr. B.S. (N=5)		2nd Yr. M.A. (N=12		3rd Yr. M.A. (N=8)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Creativity	21.1	6.1	27.3	9.6	25.9	4.3.
II Dynamism (Dominance of Energy)	22.6	2.0	25.1	3.9	25.0	3.2
III Organized Demeanor (Organization and Control)	31.8	2.0	36.2	4.0	34.3	6.2
IV Warmth and Acceptance	33.6	7.4	36.6	4.5	37.3	7.9

Table 15

COMPARISON OF TUCKMAN RATINGS FOR SECOND AND THIRD YEAR M.A. SECONDARY GRADUATES

		2nd Yr. M.A. (N=4)		3rd Yr. M.A. (N=6)	
		$\bar{X}$	SD	$\bar{X}$	SD
I	Creativity	27.7	6.9	24.1	6.7
II	Dynamism (Dominance of Energy)	28.2	5.9	24.2	3.6
III	Organized Demeanor (Organization and Control)	36.3	7.2	34.2	7.2
IV	Warmth and Acceptance	35.3	7.6	34.5	6.4

Discussion

An examination of the personal variables studied indicated that there was no pattern to the scores presented for the NTE. This was probable due, in part, to the small sample sizes available for use in the study. An examination of the small number of scores derived from the F-Scale indicated secondary teachers and those who had received the master's degree might be more authoritarian in their beliefs.

Principal ratings were mixed. Master's graduates were rated slightly higher than those who had completed only the B.S. Comparisons with ratings of all first year teachers who had participated in the study indicated few differences in perceived level of performance.

Student ratings of master's level graduates who were teaching at the secondary level were comparable to those reported in other phases of the study. Overall third year teachers were rated slightly higher than second year teachers. A comparison of second and third year teacher ratings with those given first year teachers indicated that, as a group, more experienced teachers were perceived as being more effective by students. Ratings given teachers in the lower elementary grades were similar to those reported in previous years of the study.

Ratings given by independent observers were mixed. An examination of the ratios derived from Flanders Interaction Analysis indicated second and third year teachers were performing at about the same level as first year teachers. However, an examination of the results of the administration of

the Classroom Observation Record and the Tuckman Teacher Feedback Form indicated second and third year teachers received lower ratings than first year teachers.

In general, it was found that second and third year teachers were functioning at a level comparable to or greater than for first year teachers. Attrition from the followup study, however, leads one to question the results of this aspect of the study. There are too many variables that cannot be controlled in a study of this nature.

What are the implications of this part of the study for improving the programs in teacher education at Tennessee Technological University? It is difficult to say at this point. There is a definite need to continue the inservice aspects of the programs for the programs of the College of Education. In the early years in the classroom, there is an apparent need for additional help for teachers in developing teaching strategies, classroom management, and the like.

Summary

This chapter contained the results of the followup of graduates who had received the B.S. or M.A. and had participated in the application of the Tennessee Technological University Teacher Evaluation Model for the second and third year. The results of the study were presented in a qualitative manner and indicated that second and third year teachers were performing similar or at a slightly higher level than first year teachers. The results of the study were inclusive and provided only limited information that may be of use in improving the teacher education programs of the University.

CHAPTER III

PRESENTATION AND ANALYSES OF DATA FOR 1983 GRADUATES AND COMPARISONS WITH 1981 and 1982 GRADUATES

Chapter III contains a presentation and analyses of data for those individuals who received the B.S. or M.A. in 1983 and were participating in the study for the first time. Also shown were comparisons of the data with other first year participants, i.e., those who completed their last degrees in 1981 or 1982 and participated in the study during the following years. Initially 42 individuals (16 at the B.S. and 26 at the M.A. levels) agreed to participate in the study. Reasonably complete data were collected on all but one B.S. and one M.A. graduate. Since previous studies had indicated there were few differences in those individuals teaching in the elementary grades and those teaching at the secondary level, the data were combined for some comparisons.

This chapter was divided into five sections. The first section contains an analyses of the correlation of selected variables for the two groups. The second section shows comparisons between the B.S. and M.A. graduates. The third and fourth sections contain, respectively, comparisons of the data across three years for the B.S. and M.A. graduates. The fifth section includes a brief chapter summary.

Correlation Analyses

Table 16 shows the sample size, means, standard deviations and intercorrelation matrix for selected variables for those 1983 B.S. graduates who were teaching in the elementary grades. Correlations of the variables with SET I and/or SET-II scores were omitted because of the small sample sizes. The descriptive information related to means and standard deviations will be discussed later in the Chapter.

Generally, the correlations were relatively small. Those correlations that did reach the .05 level of significance were in evidence in earlier years of the study. There were high intercorrelations between the four factors of the Principal's questionnaire, the four factors of the Tuckman Teacher Feedback Form and the three factors of the Classroom Observation Record.

Means, standard deviations and correlations for selected variables for 1983 M.A. graduates who were teaching in the elementary grades were shown in Table 17. The correlation pattern was similar to that shown in Table 16.

Table 18 shows a correlation matrix, and means and standard deviations for selected variables collected on those 1983 M.A. graduates who were teaching at the secondary level. This Table includes data collected with the SET-I. The correlations shown were similar to those reported in earlier years of the study.

Table 16

CORRELATION MATRIX FOR SELECTED VARIABLES FOR 1983 B.S. ELEMENTARY GRADUATES (N-11)*

	Factor	$\bar{X}$	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1.	F-Scale	98.3	35.5	100	-30	-09	-02	-23	13	27	65	-76	-09	46	06	59	37	54	40	51	-29
2.	PRIN-I	3.7	1.4		100	89	93	93	-23	-19	-16	03	06	28	22	28	52	30	51	38	09
3.	PRIN-II	4.1	1.4			100	93	95	-16	-31	-05	-27	-03	34	19	31	43	35	49	42	-08
4.	PRIN-III	3.6	1.3				100	91	-26	-21	-04	-08	-13	51	26	47	67	46	69	57	-04
5.	PRIN-IV	3.8	1.5					100	-24	-33	-21	-03	-05	31	11	37	50	42	52	41	12
6.	i/d	0.54	0.38						100	53	45	32	32	-23	00	-27	-35	-20	-36	-25	-61
7.	I/D	0.70	0.37							100	54	-44	-48	20	02	-05	-06	02	-08	-14	-09
8.	ST/TT	0.61	0.16								100	-53	-24	08	-26	04	10	-01	-09	-12	-57
9.	Sil/Tot	0.28	0.14									100	-14	-36	-82	-71	-49	-72	-46	-53	10
10.	Lec/Tot	0.29	0.19										100	-46	07	04	-13	06	-11	07	-26
11.	TUCK-I	27.3	5.2											100	13	71	67	70	84	71	23
12.	TUCK-II	21.4	2.3												100	07	-05	26	33	44	-17
13.	TUCK-III	32.3	6.0													100	86	92	89	90	22
14.	TUCK-IV	36.1	8.8														100	69	86	74	12
15.	COR-I	39.4	7.4															100	86	86	27
16.	COR-II	55.9	16.3																100	93	20
17.	COR-III	21.4	3.7																	100	12
18.	ACT-COMP	16.8	6.9																		100

*Underline indicates a correlation significant at or beyond the .05 level. Decimal points on all correlations have been omitted.

Table 17

CORRELATION MATRIX FOR SELECTED VARIABLES FOR 1983 M.A. ELEMENTARY GRADUATES (N=13)*

	Factor	$\bar{X}$	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.	F-Scale	98.7	17.2	100	-51	-53	-42	-07	-06	45	-47	09	-43	35	-02	14	40	12	27	-19
2.	PRIN-I	4.4	0.7		100	42	85	52	-10	-01	51	-37	31	07	-02	30	05	32	22	73
3.	PRIN-II	4.3	0.8			100	50	29	22	-22	32	-32	24	25	-48	24	22	40	09	19
4.	PRIN-III	4.4	0.8				100	61	24	-15	49	-31	45	26	-13	31	22	32	33	72
5.	PRIN-IV	4.1	0.6					100	-15	-12	18	15	-10	42	-55	50	48	55	38	36
6.	i/d	0.54	0.27						100	10	-10	-12	68	03	-10	-24	-25	-19	-06	35
7.	I/D	0.57	0.39							100	-45	-15	-32	23	-28	03	13	16	26	34
8.	ST/TT	0.61	0.36								100	-45	45	34	12	41	11	27	39	60
9.	Sil/Tot	0.33	0.25									100	-25	-34	-30	-27	-30	-32	-36	-33
10.	Lec/Tot	0.37	0.17										100	-02	28	-06	-36	-02	52	52
11.	TUCK-I	25.2	4.2											100	-34	80	85	83	92	23
12.	TUCK-II	22.1	2.9												100	-17	-36	-13	-07	-06
13.	TUCK-III	32.5	7.4													100	80	86	87	29
14.	TUCK-IV	34.5	8.0														100	79	80	04
15.	COR-I	41.2	7.6															100	85	16
16.	COR-II	53.2	14.6																100	32
17.	COR-III	21.3	7.1																	100

*Underline indicates a correlation significant at or beyond the .05 level. Decimal points on all correlations have been omitted.

Table 18

CORRELATION MATRIX FOR SELECTED VARIABLES FOR 1983 M.A. SECONDARY GRADUATES (N=12)*

	Factor	X	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1.	F-Scale	107.4	20.9	100	-20	05	19	-09	-07	-39	-10	-53	-33	-34	49	30	18	06	-33	-31	-25	-01	16	-48	-37	-36
2.	PRIN-I	4.5	0.5		100	17	52	67	11	26	-13	16	08	08	-04	-28	05	21	56	33	42	01	-15	28	13	12
3.	PRIN-II	4.6	0.5			100	39	17	26	10	15	26	36	30	37	00	-39	-36	10	57	33	-02	-42	-08	16	-18
4.	PRIN-III	4.5	0.7				100	77	-24	-02	-38	-22	05	-24	40	-35	-48	-27	49	01	39	-27	-61	-33	-28	-60
5.	PRIN-IV	4.5	0.5					100	-42	-03	-50	-06	-16	-36	-08	-27	-29	-31	28	08	28	00	-34	-11	-19	-32
6.	SET-I-1	341.6	32.0						100	60	93	07	68	91	41	44	-05	12	-09	41	33	21	-04	61	20	32
7.	SET-I-2	350.9	23.7							100	66	06	49	73	35	15	11	25	03	24	44	24	-04	47	16	15
8.	SET-I-3	281.5	50.1								100	09	61	92	38	49	-10	02	-23	28	14	56	14	52	11	23
9.	SET-I-4	308.5	30.6									100	07	31	-26	-07	-02	-17	15	41	03	-08	-18	01	22	18
10.	SET-I-5	236.5	43.4										100	80	31	-11	-18	07	26	34	67	07	-35	29	-17	-13
11.	SET-I-Tot	304.0	27.2											100	37	26	-16	03	04	44	42	20	-10	50	11	19
12.	i/d	0.44	0.35												100	36	-49	-28	-03	-18	29	-27	-49	-23	-38	-49
13.	I/D	1.57	1.95													100	-03	-39	-85	-04	-10	38	29	28	06	31
14.	ST/TT	0.39	0.24														100	76	-14	-34	-25	-17	23	08	10	45
15.	Sil/Tot	0.32	0.46															100	38	-24	-05	-31	09	17	17	33
16.	Lec/Tot	0.59	0.17																100	19	36	-47	-48	-09	04	-23
17.	TUCK-I	23.6	5.3																	100	26	56	27	62	67	44
18.	TUCK-II	21.8	2.4																		100	27	-54	25	-09	-05
19.	TUCK-III	30.3	5.0																			100	72	67	58	55
20.	TUCK-IV	32.8	7.3																				100	54	65	68
21.	COR-I	38.6	7.2																					100	65	79
22.	COR-II	50.8	16.2																						100	81
23.	COR-III	20.8	5.2																							100

[redacted]derlined indicates a correlation [redacted]gnifi[redacted]t or [redacted]nd [redacted]5 l[redacted] De[redacted] poi[redacted]n al[redacted]rela[redacted] hav[redacted]n or[redacted]d. [redacted]

Comparison of B.S. and M.A. Graduates

Table 19 shows a comparison between the B.S. and M.A. graduates for scores achieved on the American College Test (taken prior to admission to the University) and the F-Scale. This table further shows a breakdown by teaching level, i.e., secondary or elementary. Those individuals who were teaching in Resource Rooms or otherwise associated with special education classes or programs were included with the elementary groups. An examination of the mean ACT scores for the B.S. elementary and B.S. secondary group indicated that there was no significant difference. However, the secondary group had achieved a mean ACT score higher than for the elementary group.

An examination of mean F-Scale scores indicated the four groups tended to be less authoritarian in their beliefs than other groups. Mean scores were comparable with other groups who have participated in the study in past years. However, mean scores for the B.S. samples were slightly higher than for the M.A. samples. This is reverse of the situation noted over the past several years. No explanation can be offered for this observation.

Table 19

COMPARISON OF MEAN ACT COMPOSITE SCORES, AND F-SCALE SCORES FOR 1983 B.S. AND M.A. GRADUATES

Degree and Teaching Level	ACT			F-Scale		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
B.S. Elementary	10	18.4	4.5	10	108.1	14.0
M.A. Elementary	—	—	—	13	99.1	16.0
B.S. Secondary	5	20.6	4.3	5	103.3	22.9
M.A. Secondary	—	—	—	12	107.4	20.0

National Teacher Examinations scores were collected in the past and used as a part of the study. The NTE was in transition during the time the majority of the participants in this phase of the study were enrolled at the University. Part of the group had completed one version of the test, while the other had completed another. Therefore, comparisons of the data were impossible. Ten bachelor's level graduates had completed the Core Battery of the new version of the National Teacher Examinations. Mean scores, standard deviations, and percentiles for the sample were as follows: Communication Skills (Mean=664, SD=13, %=59); Professional Knowledge (Mean=661, SD=11, %=57); and General Knowledge (Mean=658, SD=12, %=51). As a whole the participants in the Tennessee Technological

University Teacher Evaluation Model project achieved higher mean scores on the NTE than the total group of students who completed their degrees in 1983.

Table 20 shows mean principal ratings for the two groups. In general there were no differences between the four groups. However, the secondary bachelor's graduates were related slightly lower than the other three groups. In general those individuals who had received the master's degree were rated higher than those who had only completed the bachelor's degree.

Comparisons of SET-I scores for the graduates were shown in Tables 21. It should be kept in mind that the SET-I was used only in the fourth grade and above. Therefore, the sample sizes for the elementary graduates were small and no attempt was made to compare the groups based on a statistical test of significance. As a whole, the elementary graduates were rated higher than those individuals teaching at the secondary level. The lowest rated group as a whole, was the secondary graduates at the bachelor's level. No explanation can be offered for this observation.

Data collected through administration of the SET-II were shown in Table 22. The SET-II was used in grades kindergarten through three. The sample sizes for the bachelor's and master's level subjects were small. The master's level graduates were rated higher by their students than were bachelor's level graduates.

Mean ratios from the administration of the Flander's Interaction Analysis were shown in Table 23. The data were mixed and were somewhat different from that previously reported in earlier years of the application of the Model to gather information for program improvement. As a group the bachelor's level graduates teaching at the elementary level appeared to be exhibiting more the qualities of good teachers than those who had completed the master's degree. The reverse was true for those who were teaching at the secondary level.

Results from the administration of the Classroom Observation Record were shown in Table 24. There were basically no differences between the four groups on the three factors of the instrument. As a whole B.S. level secondary teachers received the highest mean ratings on the three factors. These data were in contradiction to some of the findings noted above.

Data gathered through the use of the Tuckman Teacher Feedback Form were shown in Table 25. Based on the application of this instrument, there appeared to be no differences in the four groups. However, the bachelor's level graduates who were teaching at the secondary level received higher mean ratings (not significant) than the other groups. This observation is in agreement with the results obtained through the use of the Classroom Observation Record.

Table 20

COMPARISON OF MEAN PRINCIPALS RATINGS FOR 1983 B.S. AND M.A. GRADUATES

Factor	B.S. Elem. (N-10)		M.A. Elem. (N-13)		B.S. Sec. (N=5)		M.A. Sec. (N=12)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Subject Matter Competence	4.1	0.7	4.3	0.6	3.6	0.8	4.5	0.3
II Relations with Students	4.5	0.5	4.4	0.7	3.8	1.0	4.6	0.5
III Appropriateness of Assignments	4.0	0.5	4.4	0.7	4.0	0.6	4.5	0.6
IV Overall Effectiveness	4.2	0.8	4.1	0.6	3.6	0.8	4.5	0.5

Table 2i

COMPARISON OF MEAN SET-I SCORES FOR 1983 B.S. AND M.A. GRADUATES

Factor	B.S. Elem. (N=4)		M.A. Elem. (N=6)		B.S. Sec. (N=5)		M.A. Sec. (N=12)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Friendly and Cheerful	345.0	30.7	340.3	21.6	316.2	29.0	341.6	30.6
II Knowledgeable and Poised	368.3	4.5	358.2	16.1	338.8	34.9	350.9	22.7
III Lively and Interesting	343.3	29.4	313.2	17.5	284.9	35.9	281.5	48.0
IV Firm Control (Discipline)	312.0	11.5	304.8	29.1	282.9	12.9	308.5	29.3
V Non-Directive (Democratic Process)	255.0	42.2	239.6	28.8	255.0	38.4	236.4	41.5
Composite Score	323.3	21.3	311.5	10.6	295.4	27.5	304.0	26.1

Table 22

COMPARISON OF MEAN SET-II SCORES FOR 1983 B.S. AND M.A. GRADUATES

Factor		B.S. Elem. (N=7) $\bar{X}$	B.S. Elem. (N=7) SD	M.A. Elem. (N=6) $\bar{X}$	M.A. Elem. (N=6) SD
I	Rapport	5.31	0.36	5.63	0.36
II	Interactional Competence	4.29	0.23	4.43	0.45
III	Stimulating Interaction Style (Comb. of I & II)	9.60	0.53	10.07	0.45
IV	Unreasonable Negativity	8.97	0.86	8.38	0.83
V	Fosterance of Self Esteem	6.45	0.71	7.12	0.36

Table 23

COMPARISON OF FLANDERS RATIOS FOR 1983 B.S. AND M.A. GRADUATES

Ratio	B.S. Elem. (N=11)		M.A. Elem. (N=13)		B.S. Sec. (N=5)		M.A. Sec. (N=12)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	1.20	1.56	0.58	0.38	0.20	0.22	1.58	1.87
i/d	0.54	0.37	0.55	0.27	0.19	0.17	0.44	0.34
ST/TT	0.62	0.16	0.59	0.34	0.55	0.43	0.39	0.23
Sil/Tot	0.28	0.14	0.34	0.24	0.42	0.30	0.33	0.45
Lec/Tot	0.29	0.19	0.36	0.16	0.45	0.22	0.59	0.17

Table 24

COMPARISON OF MEAN TUCKMAN FACTOR SCORES FOR 1983 B.S. AND M.A. GRADUATES

Factor	B.S. Elem. (N=11)		M.A. Elem. (N=13)		B.S. Sec. (N=5)		M.A. Sec. (N=12)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	39.4	7.0	40.8	7.1	41.0	4.9	38.6	6.9
II	55.9	15.5	52.6	13.7	59.6	10.2	50.8	15.5
III	21.4	3.6	21.3	6.6	22.0	2.5	20.8	5.0

Table 25

COMPARISON OF MEAN TUCKMAN FACTOR SCORES FOR 1983 B.S. AND M.A. GRADUATES

Factor	B.S. Elem. (N=11)		M.A. Elem. (N=13)		B.S. Sec. (N=5)		M.A. Sec. (N=12)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Creativity	27.3	4.9	25.4	4.0	26.8	5.4	23.6	5.1
II Dynamism (Dominance of Energy	21.4	2.2	22.0	2.7	22.8	6.3	24.2	5.1
III Organized Demeanor (Organization and Control)	32.3	5.7	32.5	6.9	34.0	4.2	30.3	4.8
IV Warmth and Acceptance	36.1	8.4	34.7	7.4	36.4	4.7	32.8	7.0

In summary, the results of this part of the study were mixed. The bachelor's level graduates appeared to be functioning at a higher level than the master's graduates, as measured by selected instruments, and vice versa. Also, it appeared that in some cases that those individuals teaching in the elementary grades were functioning at a higher level than those teaching at the secondary level. In general the differences between the groups were small and not statistically significant.

Comparison of First Year B.S. Graduates 1981-83

This section contains a summary of the results of the comparisons of first year B.S. graduates for the period 1981 through 1983. Previous research indicated there were few differences between those individuals teaching at the elementary and secondary levels. The analysis of variance technique was employed to determine differences between the three groups.

Table 26 shows a comparison of the mean ACT and F-Scale scores for the three groups. Mean ACT scores for the 1983 graduates were higher than for the 1981 and 1982 samples (n.s.). F-Scale scores over the three years period were mixed. However, the 1983 graduates were similar to the 1981 graduates.

Table 26

COMPARISON OF ACT COMPOSITE AND F-SCALE SCORES FOR FIRST YEAR B.S. GRADUATES 1981-83

	1981			1982			1983		
Test	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
ACT	10	17.2	3.6	14	16.1	3.8	15	19.1	4.4
F-Scale	10	107.9	20.4	14	101.6	22.1	15	106.4	16.8

An examination of the mean ratings given by principals was shown in Table 27. The differences were not significant, however, the 1983 graduates as a group were rated lower than 1981 or 1982 graduates. The 1983 group as a whole received lower ratings than other groups who were a part of the study in the 1970's.

Results from the administration of the SET-I were shown in Table 28. Results from the 1983 sample were not significantly different from those in 1981 and 1982. However, the group as a whole was rated slightly lower by students than were subjects in the 1981 and 1982 phases of the study. SET-II mean scores were shown in Table 29. Again, the 1983 graduates were rated slightly lower than the 1981 or 1982 graduates. No explanation can be offered for this observation.

Table 27

COMPARISON OF MEAN PRINCIPAL'S RATINGS FOR FIRST YEAR B.S. GRADUATES 1981-83

Factor	1981 (N=7) $\bar{X}$	1981 (N=7) SD	1982 (N=39) $\bar{X}$	1982 (N=39) SD	1983 (N=15) $\bar{X}$	1983 (N=15) SD
I Subject Matter Competence	4.4	0.5	4.1	0.7	3.9	0.7
II Relations with Students	4.4	0.5	4.4	0.7	4.3	0.7
III Appropriateness of Assignments	4.4	0.5	4.3	0.6	4.0	0.6
IV Overall Effectiveness	4.4	0.5	4.2	0.8	4.0	0.8

Table 28

COMPARISON OF MEAN SET-I SCORES FOR FIRST YEAR B.S. GRADUATES 1981-83

Factor	1981 (N=3) $\bar{X}$	1981 (N=3) SD	1982 (N=8) $\bar{X}$	1982 (N=8) SD	1983 (N=9) $\bar{X}$	1983 (N=9) SD
I Friendly and Cheerful	354.7	9.0	342.3	31.8	329.0	30.2
II Knowledgeable and Poised	327.0	48.8	345.0	41.3	351.7	28.9
III Lively and Interesting	310.9	33.2	331.7	22.0	313.9	37.3
IV Firm Control (Discipline)	269.7	56.0	312.4	24.8	295.8	12.1
V Non-Directive (Democratic Process)	241.3	13.3	267.5	38.7	255.0	40.3
Composite Score	280.3	45.5	325.3	40.6	307.8	24.4

Table 29

COMPARISON OF MEAN SET-II SCORES FOR FIRST YEAR B.S. GRADUATES 1981-83

Factor	1981 (N=4) $\bar{X}$	1981 (N=4) SD	1982 (N=8) $\bar{X}$	1982 (N=8) SD	1983 (N=7) $\bar{X}$	1983 (N=7) SD
I Rapport	5.24	0.11	5.86	0.56	5.31	0.36
II Interactional Competence	4.43	0.27	4.67	0.46	4.29	0.23
III Stimulating Interaction Style (Comb. of I & II)	9.67	0.21	10.53	0.88	9.60	0.53
IV Unreasonable Negativity	9.32	0.24	8.56	0.47	8.97	0.86
V Fosterance of Self Esteem	5.64	2.15	6.87	0.70	6.45	0.71

Mean ratios derived from the use of Flanders Interaction Analysis were shown in Table 30. The 1983 group was using significantly ($p < .05$) less indirect teaching in their classrooms than the 1982 group.

Table 31 shows mean Classroom Observation Record scores. There were no significant differences between the three groups. However, the 1983 group achieved a mean score much lower on Factor II than the other two groups. Scores derived from the administration of the Tuckman Teacher Feedback Form were shown in Table 32. Again there were no significant differences between the three groups.

In summary, there were few differences across the three groups of B.S. graduates. The scores derived from the various instruments were mixed across the period and there was no trend in evidence. The reader should keep in mind that the sample sizes for some of the groups were small and the use of extensive inferential statistics could lead to erroneous conclusions.

Table 30

COMPARISON OF MEAN FLANDERS RATIOS FOR FIRST YEAR
B.S. GRADUATES 1981-83

	1981 (N=10)		1982 (N=18)		1983 (N=16)	
Ratio	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	1.15	1.74	1.87	3.88	0.89	1.23
i/d	0.68	0.61	0.82	0.54	0.43	0.28
ST/TT	0.47	0.25	0.72	0.38	0.60	0.30
Sil/Tot	0.52	0.45	0.33	0.60	0.30	0.21
Lec/Tot	0.31	0.13	0.37	0.20	0.31	0.20

Table 31

COMPARISON OF MEAN COR SCORES FOR FIRST YEAR
B.S. GRADUATES 1981-83

	1981 (N=10)		1982 (N=18)		1983 (N=16)	
Factor	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	42.0	1.6	41.8	1.5	39.9	5.8
II	64.4	2.3	65.2	2.4	57.2	12.8
III	22.9	2.0	23.0	2.1	21.6	3.2

Table 32

COMPARISON OF MEAN TUCKMAN SCORES FOR FIRST YEAR
B.S. GRADUATES 1981-83

Factor	1981 (N=10)		1982 (N=18)		1983 (N=16)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Creativity	29.4	7.1	21.9	4.1	27.1	5.2
II Dynamism (Dominance of Energy)	33.6	4.5	24.8	4.3	26.8	4.3
III Organized Demeanor (Organization and Control)	35.3	2.7	30.8	6.1	32.8	4.5
IV Warmth and Acceptance	35.3	2.3	34.3	7.4	36.2	6.8

Comparison of First Year M.A. Graduates 1981-83

This section contains a summary of the results of comparisons of first year M.A. graduates for the period 1981 through 1983. The analysis of variance technique was employed to determine differences between the three groups.

Table 33 shows a comparison of scores derived from the ACT and F-Scale. The number of M.A. participants for which ACT scores were available was small. These data were omitted for the group. Mean F-Scale scores for the three groups were not significantly different.

Table 33

COMPARISON OF ACT COMPOSITE AND F-SCALE SCORES FOR FIRST YEAR M.A. GRADUATES 1981-83

	1981			1982			1983		
Test	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
ACT	14	19.6	4.3	7	16.7	5.5	-	-	-
F-Scale	30	106.0	21.4	27	103.3	17.2	25	103.1	18.1

Mean ratings given by principals were shown in Table 34. There were no significant differences in the three groups on each of the four variables, nor were there any trends in evidence.

Comparisons of SET-I and SET-II scores were shown, respectively in Tables 35 and 36. There were no significant differences in the three groups for scores on either instrument. However, there was some indication that the 1983 graduates were perceived as functioning at a lower level than the 1981 or 1982 graduates who were participating in the project.

Results of the use of Flanders Interaction Analysis were shown in Table 37. There were no significant differences among the three groups. Comparisons of mean factor scores derived from the use of the Classroom Observation Record were shown in Table 38. The 1983 group was rated significantly lower in the area of cognitive skills than the 1981 or 1982 groups ($p < .05$). No explanation can be offered for these results. Table 39 shows a comparison of the results obtained from the use of the Tuckman Teacher Feedback Form. There were no significant differences between the three groups.

In summary there were few differences across the three groups of M.A. graduates who were participating in the study during their first year after receiving the M.A. In general, the 1983 graduates achieved slightly lower scores and ratings than the other 1981 or 1982 graduates.

Summary

This chapter contains an overview of the results of the eleventh year of the application of the Tennessee Technological University Teacher Evaluation Model to 1983 graduates of the teacher education programs of the University. The graduates were teaching across the full spectrum of grades K-12. However, based on the results of earlier work, it was found there were few differences between elementary and secondary teachers. Therefore, for purposes of the analyses reported in this chapter the data were

Table 34

COMPARISON OF MEAN PRINCIPAL'S RATINGS FOR
FIRST YEAR M.A. GRADUATES 1981-83

Factor	1981 (N=33) $\bar{X}$	1981 (N=33) SD	1982 (N=26) $\bar{X}$	1982 (N=26) SD	1983 (N=25) $\bar{X}$	1983 (N=25) SD
I Subject Matter Competence	4.4	0.6	4.4	0.6	4.4	0.5
II Relations with Students	4.5	0.7	4.5	0.6	4.5	0.6
III Appropriateness of Assignments	4.3	0.6	4.2	0.7	4.4	0.6
IV Overall Effectiveness	4.3	0.6	4.4	0.7	4.3	0.5

Table 35

COMPARISON OF MEAN SET-I SCORES FOR FIRST YEAR
M.A. GRADUATES 1981-83

Factor	1981 (N=23) $\bar{X}$	1981 (N=23) SD	1982 (N=19) $\bar{X}$	1982 (N=19) SD	1983 (N=18) $\bar{X}$	1983 (N=18) SD
I Friendly and Cheerful	355.1	27.6	345.5	31.2	341.2	25.6
II Knowledgeable and Poised	359.6	14.7	351.7	20.1	353.3	18.2
III Lively and Interesting	307.4	44.3	304.3	33.3	292.1	37.8
IV Firm Control (Discipline)	311.5	34.2	297.3	22.0	307.2	29.2
V Non-Directive (Democratic Process)	268.2	33.0	259.6	54.5	237.4	37.3
Composite Score	317.7	20.4	311.8	22.9	306.5	20.9

Table 36

COMPARISON OF MEAN SET-II SCORES FOR FIRST YEAR M.A. GRADUATES 1981-83

Factor	1981 (N=8) $\bar{X}$	1981 (N=8) SD	1982 (N=11) $\bar{X}$	1982 (N=11) SD	1983 (N=6) $\bar{X}$	1983 (N=6) SD
I Rapport	6.07	1.08	5.60	6.58	5.63	0.36
II Interactional Competence	4.46	0.52	4.65	0.38	4.43	0.45
III Stimulating Interaction Style (Comb. of I & II)	10.54	1.43	10.26	0.79	10.07	0.45
IV Unreasonable Negativity	9.26	1.14	8.03	0.92	8.38	0.83
V Fosterance of Self Esteem	6.64	1.05	6.85	0.54	7.12	0.36

Table 37

COMPARISON OF MEAN FLANDERS RATIOS FOR FIRST YEAR M.A. GRADUATES 1981-83

Ratio	1981 (N=32) $\bar{X}$	1981 (N=32) SD	1982 (N=29) $\bar{X}$	1982 (N=29) SD	1983 (N=25) $\bar{X}$	1983 (N=25) SD
I/D	1.21	1.68	1.09	0.79	1.08	1.12
i/d	0.52	0.48	0.60	0.42	0.50	0.31
ST/TT	0.50	0.37	0.65	0.49	0.49	0.28
Sil/Tot	0.30	0.33	0.21	0.24	0.34	0.35
Lec/Tot	0.48	0.24	0.46	0.20	0.48	0.17

Table 38

COMPARISON OF MEAN COR SCORES FOR FIRST YEAR M.A. GRADUATES 1981-83

Factor	1981 (N=33) $\bar{X}$	1981 (N=33) SD	1982 (N=29) $\bar{X}$	1982 (N=29) SD	1983 (N=25) $\bar{X}$	1983 (N=25) SD
I	42.2	1.4	41.9	1.8	39.7	7.0
II	66.1	3.0	66.3	3.4	52.7	14.3
III	23.6	1.7	23.1	1.7	21.1	5.8

Table 39

COMPARISON OF MEAN TUCKMAN SCORES FOR FIRST YEAR M.A. GRADUATES 1981-83

Factor	1981 (N=32) $\bar{X}$	1981 (N=32) SD	1982 (N=29) $\bar{X}$	1982 (N=29) SD	1983 (N=25) $\bar{X}$	1983 (N=25) SD
I Creativity	31.5	5.5	22.8	5.4	24.6	4.6
II Dynamism (Dominance of Energy)	33.8	5.7	24.6	4.7	24.4	3.9
III Organized Demeanor (Organization and Control)	36.3	1.8	33.0	5.0	31.7	4.6
IV Warmth and Acceptance	35.9	2.3	35.6	6.3	33.8	7.2

combined for those teaching at the elementary and secondary levels. However, the data were separated based on degree level.

Correlation analyses of the variables for the two groups were similar to those reported in earlier years of the study. Career baseline data for the B.S. and M.A. graduates were similar to those reported in the past three years and there were no significant differences. An examination of the various measures indicated there were no significant differences between the first year B.S. and M.A. graduates. In general, the M.A. graduates achieved higher scores and ratings. Comparisons of first year B.S. graduates with similar data collected on samples of 1981 and 1982 participants in the project, indicated there were few differences across the three groups. Similar results were evident for the M.A. graduates.

CHAPTER IV

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND FUTURE PLANS

The objectives of Chapter IV were fourfold: (1) to provide a brief summary of the total evaluation study conducted in 1983-84; (2) present a summary of the major conclusions of the study for the year; (3) present recommendations based on the conclusions of the study; and (4) provide a summary of the plans for the continuation of the study during 1984-85.

Summary

Three groups of subjects (graduates of the teacher education programs of Tennessee Technological University) served as subjects for the study. The sample sizes by year of graduation were as follows: 1981--14, 1982--24, and 1983--42 (including 16 B.S. and 26 M.A. graduates). Data were collected on each subject by use of standardized instruments and specially constructed questionnaires administered by trained graduate research assistants. Also, personal data about each graduate were collected from University records. Basic instrumentation and procedures for the study were pilot tested during the first year of the study and have remained essentially unchanged. The instrumentation for the current year included: (1) University permanent records and transcript information, (2) principal's evaluation of each subject, (3) administration of the California F-Scale (to those individuals participating in the study for the first time) to measure individual prejudices and anti-democratic tendencies, (4) administration of the Classroom Observation Record and the Tuckman Teacher Feedback Form, (5) administration of either the Student Evaluation of Teaching or the Student Evaluation of Teacher, and (6) a ten category interaction analysis system to record classroom behavior. All data obtained in the study were classified, coded and key-punched for analyses. Descriptive statistics, intercorrelations, and comparisons were computed. The major findings of the study were divided into three major parts, e.g., an examination of second and third year participants in the study, comparisons of first year subjects across three years and comparisons of B.S. and M.A. level graduates.

The major findings of the study for the first year subjects (1983 graduates) were similar to those reported throughout the previous ten years of the project. Comparisons made between the B.S. and M.A. graduates revealed few differences in scores and ratings of performance. However, the general trend indicated that those individuals with the M.A. were functioning at a higher level. A comparison of first year data across three years indicated there were few differences in the three groups. The sample sizes were relatively small for the data collected on the second and third year participants. Therefore, only limited inferences could be made from the data. It appeared that those individuals who had remained in the study achieved higher ratings than first year participants.

Based on the findings of the study, several conclusions were advanced and recommendations made for continuation of the study. These follow in the next sections of this chapter.

Conclusions

Following are the major conclusions of the study based on the findings of the eleventh year of operation of the project. Additional analyses of the data are planned that may make other conclusions possible. This section is divided into three parts: Use of the Evaluation Model, Evaluation of the 1983 Graduates, and Comparison of Data Across Time.

Use of the Evaluation Model

(1) The plan of evaluation outlined in this report appeared to be useful in gathering information for modifying and improving the programs of teacher education at Tennessee Technological University.

(2) Instrumentation employed in the study appeared to be valid and provided essential information with regard to the graduates of the teacher education programs.

(3) Modifications can be made in the original model that can lead to more valid and useful information for an institution wishing to replicate the plan of evaluation.

(4) Additional ways need to be found to facilitate the use of the reports for curriculum improvement.

Evaluation of 1983 Graduates

(1) The B.S. and M.A. subjects who participated in the study for the first year in 1983-84 exhibited characteristics similar to their counterparts who had participated in earlier phases of the project.

(2) B.S. subjects who participated in the study for the first time during 1983-84 had achieved mean scores on the ACT prior to entering the University that were higher when compared to other students who entered the University in 1980. Also mean ACT scores were higher than for first year participants in the 1981 and 1982 phases of the study.

(3) Principals' ratings of performance of the graduates tended to agree with the data collected through the use of the Student Evaluation of Teaching or the Student Evaluation of Teacher, the Classroom Observation Record, and the Tuckman Teacher Feedback Form.

(4) Overall scores achieved by the subjects on the National Teacher Examinations placed them above the 50th percentile which is comparable to other groups of graduates who had participated in the study.

(5) Many of the characteristics reported in the literature of good teachers were noted as a result of the administration of the Classroom Observation Record.

(6) The subjects in the study appeared to be using more indirect than direct teaching in their classrooms. Indirect/Direct ratios, based on the interaction analysis system used were higher than for other comparable groups of teachers.

(7) In general, first year M.A. subjects received comparable or higher ratings than B.S. subjects. Even though the differences were not significant, there was a trend indicating that individuals, after receiving the master's degree were better prepared at the time of entrance into the classroom.

The subjects of this study possessed many of the characteristics of good teachers as reported in the literature. As might be expected, it was difficult to identify specific problems. Principals praised the subjects as did their students. However, it must be kept in mind that the subjects who participated in this study were volunteers. Therefore, some bias was introduced into the total study that may make some of the conclusions and findings invalid when applied to the total population of graduates.

Comparisons of Data Across Time

(1) The 1983 B.S. and M.A. graduates of the teacher education programs of the University were functioning at a level comparable with first year 1981 and 1982 graduates.

(2) Second and third year participants in the study were functioning at or slightly above the level reported when they were in their first year of the study.

RECOMMENDATION

Based on the findings and conclusions of the study, it was felt the following recommendations were warranted. These recommendations centered largely around the continuation and modification of the study. It was left to the reader to make recommendations relative to his/her individual problems and concerns and toward needed changes in the teacher education program of the institution.

(1) The basic plan outlined in this report should be replicated during 1984-85 adding another group of subjects who complete the B.S. or M.A. requirements in 1984.

(2) Continuing contact should be maintained with other institutions and agencies pursuing similar projects and the literature related to teacher evaluation should be continuously monitored.

(3) There is a need to identify more reliable and valid instruments to collect basic data.

(4) Further analyses of the data should be made employing more sophisticated statistical techniques.

(5) Faculty of the University and other individuals should be encouraged to review the report and to request additional data analyses to fit their individual needs.

(6) Uses of the data in the development and modification of curricula should be encouraged by the administration of the University.

(7) A more extensive data bank of information on all students in the teacher education programs should be established.

(8) Other studies supportive of the evaluation model should be initiated.

Plans for Continuation of the Study During 1984-85

During 1984-85, particular emphasis will be placed on studies of the graduates of the teacher education programs for the period 1982 through 1984. Subjects who graduated prior to 1982 will be dropped from further study as per the design of the project. The potential population of 1982 and 1983 graduates was 66. In addition, a sample of approximately 45 B.S. and M.A. 1984 graduates will be added to the study. Also, a sample of Ed.S. graduates who are teaching within the defined area of the study will be added to the study.

Figure 2, in Chapter I, shows an abbreviated PERT chart for the major activities of the project during 1983-84. Tentatively this same plan will be followed during 1984-85. Initially two graduate assistants will engage in intensive studies of the use of the various classroom observation instruments between mid-September and mid-October. Concurrent with these activities, a schedule of visitation will be developed for the 1982 and 1983 graduates that have previously participated in the study. Of the 66 individuals who have previously participated in the study, it is anticipated that obout 40 to 45 percent will drop out for a variety of reasons. The remaining subjects will be visited starting about the 25th of October 1984 and continue into December or early January 1985.

During the early part of October 1984, a survey questionnaire will be sent to all 1984 graduates (fall 1983, winter 1984, spring 1984, and summer 1984) of the teacher education programs of the University. All 1984 B.S. and M.A. education graduates teaching within a 65-75 mile radius of the University will be asked to participate in the study. It is anticipated that a sample of 20 to 25 B.S. graduates and 25 to 30 M.A. graduates will be selected for inclusion in the study. A schedule of visitation will be prepared in the early winter of 1985, and visits for purposes of observation and gathering baseline data will be carried out during the winter and spring of 1985.

Beginning in the late spring and continuing into the summer of 1985, data analyses will be made and a report of the eleventh year activities of the project will be prepared. The report will include detailed comparisons with the results obtained in previous years. During 1984-85, time permitting, a series of special studies will be completed that will lend extra data to the total project.

In the past years other evaluation systems have been developed by such agencies as the Georgia Department of Education, the Florida Department of Education, and various universities. These projects will be monitored during 1984-85 with the view of modifying or restructuring the Tennessee Technological University Teacher Evaluation Model. Also, liaison will be maintained with the Teacher Education Program Followup group based in the Research and Development Center for Teacher Education at the University of Texas at Austin.

Long Range Plans

Based on the high level of acceptance by the University and the interest shown by other groups, the project has been integrated into the total operation of the teacher education program. Teacher followup evaluations will continue at Tennessee Technological University on an indefinite basis. It is anticipated the project will be improved and will continue to be recognized as a project of national significance.

APPENDIX

REPORTS AND STUDIES RELATED TO THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

1. Ayers, Jerry B. Report 1-Restudy. A Survey of the Graduates of the Teacher Preparation Programs of Tennessee Technological University for the Period 1965 through 1969, Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 49 pp.

2. Faculty of the College of Education. Report II-Restudy. Objectives of the Teacher Preparation Program, Volume I, Volume II, and Volume III. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 910 pp. Out of print.

3. Ayers, Jerry B. Report III-Restudy. A Report of Four Surveys of the Graduates of the Teacher Preparation Programs of Tennessee Technological University for the Period 1965 through 1970. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 39 pp.

4. Ayers, Jerry B. "Predicting Quality Point Averages in Master's Degree Programs in Education." Educational and Psychological Measurement, 31:491-95, 1971.

5. Ayers, Jerry B. A Survey of Student Teachers at Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 7 pp.

6. Ayers, Jerry B. Report V-Restudy. A Report of Two Surveys of the 1971 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1972. (mimeo.), 28 pp.

7. Ayers, Jerry B. and Michael E. Rohr. "Prediction of Quality Point Averages from Personality Variables," Educational and Psychological Measurement, 32:491-94, 1972.

8. Dotson, James R. and Jerry B. Ayers. "A Systematic Plan for the Restudy of a Teacher Education Program," The Tennessee Tech Journal, 7:85-89, 1972.

9. Ayers, Jerry B. and Michael E. Rohr. "The Relationship of Student Grade Expectations, Selected Characteristics, and Academic Performance for Education, Engineering, and Business Majors," Presented before the American Educational Research Association, April 1972, Chicago, IL.

10. Brimm, Jack L. and Jerry B. Ayers. "Attitudes of Students Toward Education and Liberal Arts Courses," Presented before the Mid-South Educational Research Association Meeting, November 1973, Memphis, TN.

11. Ayers, Jerry B. Report VI-Restudy. A Report of Three Surveys of the 1972 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1973. (mimeo.), 38 pp.

12. Ayers, Jerry B., Florinda A. Bustamante, and Philip J. Campana. "Prediction of Success in College Foreign Language Courses," Educational and Psychological Measurement, 33:939-42, 1973.

13. Rohr, Michael E. and Jerry B. Ayers. "Relationship of Student Grade Expectations, Selected Characteristics, and Academic Performance," The Journal of Experimental Education, 41:58-62, 1973.

14. Ayers, Jerry B. Report 74-1. A Report of Three Surveys of the 1973 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 34 pp.

15. Riddle, Barbara Ann. Report 74-2. An Evaluation of the Graduate Program in Health and Physical Education at Tennessee Technological University By a Followup Study of the Graduates. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 119 pp.

16. Ayers, Jerry B. and Robert E. DuBey. "Student Teachers Attitudes Toward Supervising Teachers," The Educational Catalyst, 4:17-22, 1974.

17. Ayers, Jerry B. and Michael E. Rohr. "Relationship of Selected Variables and Success in a Teacher Preparation Program," Educational and Psychological Measurement, 34 (4):933-37, Winter 1974.

18. Ayers, Jerry B. Report 74-3. Study of the Graduates of the Library Science Program of Tennessee Technological University 1969-73. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 28 pp.

19. Bilbrey, Leroy. Human Relations Skills and Teacher Effectiveness. Unpublished M.A. Thesis, College of Education, Tennessee Technological University, 1974.

20. Ayers, Jerry B. Report 74-4. Tennessee Technological University Teacher Evaluation Model. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 92 pp., ERIC No. 095 169.

21. Duncan, Barbara Louise. Report 74-5. Study of the Graduates of the Counselor Education Program of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 33 pp.

22. Ayers, Jerry B. Report 74-6. Study of the Use of the Graduate Record Examination. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 10 pp

23. Ayers, Jerry B. Report 74-7. Study of the Graduates of the Ed.S. Programs of Tennessee Technological University for the Period 1971 through 1974. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 17 pp.

24. Ayers, Jerry B. Report 75-1. A Report of Three Surveys of the 1974 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1975. (mimeo.), 18 pp.

25. Perry Don M. Report 75-2. Investigation of the Relationships Between Authoritarianism of Principals and Their Ratings of Teachers. Unpublished Ed.S. Problem Paper. Cookeville, TN: Tennessee Technological University, College of Education, 1975. 18 pp.

26. Cassetty, Mary J.G. Report 75-3. A Followup Study of the Master's and Educational Specialist's Degree Recipients in Administration and Supervision at Tennessee Technological University. Unpublished Ed.S. Problem Paper. Cookeville, TN: Tennessee Technological University, College of Education, 1975. 64 pp.

27. Ayers, Jerry B. Report 75-4. Tennessee Technological University Teacher Evaluation Model—Year II. Cookeville, TN: Tennessee Technological University, College of Education, 1975. (mimeo.), 61 pp., ERIC No. 123 210.

28. Ayers, Jerry B. Report 75-5. Application of Tennessee Technological University Teacher Evaluation Model in Methods Classes in the College of Education. Cookeville, TN: Tennessee Technological University, College of Education, 1975. (mimeo.), 26 pp.

29. Ayers, Jerry B. Report 75-6. A Report of Three Surveys of the 1975 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1975. (mimeo.), 24 pp.

30. Ayers, Jerry B. and Jack Brimm. "Student Attitudes Toward Education Courses." College Student Journal, 9:172-73, 1975.

31. Ayers, Jerry B. and Merton J. Turck. "Longitudinal Study of Change in Teacher Dogmatism," College Student Journal, 10(1):84-7, 1976.

32. Ayers, Jerry B. "Implementation of a Longitudinal Model for Teacher Evaluation." Education, 96 (3):218-21, Spring 1976.

33. Cassetty, Mary Jane Gore and Jerry B. Ayers. "Performance of Principals as Evaluated by Themselves, Superintendents, and Teachers," The Tech Journal, 11 (1):67-80, 1976.

34. Ayers, Jerry B. Report 76-1. Tennessee Technological University Teacher Evaluation Model--Year III, Cookeville, TN: Tennessee Technological University, College of Education, 1976. (mimeo.), 76 pp., ERIC No. 126 085.

35. Ayers, Jerry B. "Followup Studies at Tennessee Technological University," Published in Forces for Molding Management and Control of Teacher Education (proceedings of the Sixth Annual Teacher Education Conference), Atlanta: Southern Regional Education Board, 1976, pp. 7-13, ERIC No. 152 695.

36. Ayers, Jerry B. Report 77-1. A Report of Three Surveys of the 1976 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1977. (mimeo.), 20 pp.

37. Ayers, Jerry B. Report 77-2. Tennessee Technological University Teacher Evaluation Model--Year IV, Cookeville, TN: Tennessee Technological University, College of Education, 1977, 100 pp. ERIC Document No. 148 778.

38. Ayers, Jerry B. Report 78-1. A Report of Three Surveys of the 1977 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1978. (mimeo.), 20 pp.

39. Ayers, Jerry B. Report 78-2. Tennessee Technological University Teacher Evaluation Model—Year V, Cookeville, TN: Tennessee Technological University, College of Education, 1978, 54 pp. ERIC Document No. 167 487.

40. Ayers, Jerry B. Report 79-1. A Report of Three Surveys of the 1978 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1979. (mimeo.), 21 pp.

41. Ayers, Jerry B. "Followup Studies at Tennessee Technological University: A Model for Teacher Evaluation," Presented before the Annual Meeting of the National Association for Research in Science Teaching, Atlanta, March 1979. ERIC Document No. 170 142.

42. Ayers, Jerry B. "Followup Studies: Providing the Thrust for Program Improvement," Presented before the Annual Meeting of the American Educational Research Association, San Francisco, April 1979.

43. Ayers, Jerry B. and Mary Elledge. "Teacher Attitudes and Effective Learning Environments," Presented before the Annual Meeting of the Mid-South Educational Research Association, Little Rock, November 1979.

44. Ayers, Jerry B. "Evaluation for Program Improvement in Teacher Education," Presented in part before the 5th International Conference on Improving University Teaching, London, England, July 1979.

45. Ayers, Jerry B. Report 79-2. Tennessee Technological University Teacher Evaluation Model--Year VI, Cookeville, TN: Tennessee Technological University, College of Education, 1979, 56 pp. ERIC Document No. 179 535.

46. Ayers, Jerry B. and Glenda S. Qualls. "Concurrent and Predictive Validity of the National Teacher Examinations," Journal of Educational Research, 73 (2): pp. 86-92, November/December 1979.

47. Ayers, Jerry B. "Teacher Evaluation in Early Childhood Education: Application of a Model." Presented in part before the International Congress on Early Childhood Education, Tel Aviv, Israel, January 1980. ERIC Document No. 186 110.

48. Ayers, Jerry B. "Tennessee Technological University Teacher Evaluation Model: An Update." Presented in part before the Annual Meeting of the American Association of Colleges for Teacher Education, Dallas, TX, February 1980.

49. Ayers, Jerry B. Report 80-1. A Report of Three Surveys of the 1979 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1980. (mimeo.), 21 pp.

50. Ayers, Jerry B. "A Longitudinal Study of Teachers." Presented before the Annual Meeting of the American Educational Research Association, Boston, MA, April 1980.

51. Ayers, Jerry B. "Meeting Evaluation Standards on Teacher Education Programmes," The Bulletin of Educational Research, 19:14-15, Summer 1980.

52. Ayers, Jerry B., Michael E. Rohr and Leroy Bilbrey. "Human Relations Skills and Teacher Characteristics," Education, 100 (4):348-51, Summer 1980.

53. Ayers, Jerry B. and Glenda S. Qualls. "Teacher Attitudes and Effective Learning Environments." Presented in part before the Annual Meeting of the Mid-South Educational Research Association, New Orleans, November 1980.

54. Ayers, Jerry B. Report 80-2. Tennessee Technological University Teacher Evaluation Model--Year VII, Cookeville, TN: Tennessee Technological University, College of Education, 1980, 55 pp. ERIC Document No. 191 833.

55. Ayers, Jerry B. Report 81-1. A Report of Three Surveys of the 1980 Graduates of the Teacher Preparation Program of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1981. (mimeo.), 20 pp.

56. Ayers, Jerry B. "Design Characteristics for Meaningful Teacher Education Evaluation." Presented before the Annual Meeting of the American Association of Colleges for Teacher Education, Detroit, MI, February 1981. Published in Teacher Education Program Evaluation, 1981: Theory and Practice. Edited by Shirley M. Hord and Ronald D. Adams. Research and Development Center for Teacher Education, The University of Texas at Austin, TX, 1981, pp. 49-58.

57. Hearn, Edell M. "Finance and Resource Allocation Relative to Teacher Education Evaluation." Presented before the Annual Meeting of the American Association of Colleges for Teacher Education, Detroit, MI, February 1981. Published in Teacher Education Program Evaluation, 1981: Theory and Practice. Edited by Shirley M. Hord and Ronald D. Adams. Research and Development Center for Teacher Education, The University of Texas at Austin, Austin, TX, 1981, pp. 59-64.

58. Ayers, Jerry B. and Glenda S. Qualls. "Authoritarianism and Teachers' Classroom Behavior," Reading Improvement, 19(3):219-22, Fall 1982.

59. Ayers, Jerry B. Report 81-2. Tennessee Technological University Teacher Evaluation Model--Year VIII, Cookeville, TN: Tennessee Technological University, College of Education, 1981, 53 pp. ERIC Document No. 211 488.

60. Ayers, Jerry B. Report 81-3. A Report of Three Surveys of the 1981 Graduates of the Teacher Preparation Program of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1981. (mimeo.), 23 pp.

61. Evans, Janie Marie. Verbal Interaction Patterns in the Classroom of Selected K-3 Teachers. Unpublished M.A. Problem Paper, College of Education, Tennessee Technological University, 1982, 81 pp.

62. Ayers, Jerry B. Report 82-1. Instrumentation, Procedures and Methodology for the Tennessee Technological University Teacher Evaluation Model, Cookeville, TN: College of Education, Tennessee Technological University, 1982, 81 pp.

63. Ayers, Jerry B. Report 82-2. Tennessee Technological University Teacher Evaluation Model--Year IX, Cookeville, TN: Tennessee Technological University, College of Education, 1982, 98 pp. ERIC Document No. 217 020.

64. Lamberth, Edwin E. Professional Competencies Needed and Presently Held by Beginning Teachers of Vocational Agriculture in Tennessee, Cookeville, TN: Tennessee Technological University, College of Agriculture and Home Economics, 1982. (mimeo.), 33 pp.

65. Ayers, Jerry B. Report 82-3. A Report of Three Surveys of the 1982 Graduates of the Teacher Preparation Program of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1982. (mimeo.), 19 pp.

66. Lamberth, Edwin and Sumner A. Griffin. A Follow-up of Graduates of the College of Agriculture at Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Agriculture and Home Economics, 1983. (mimeo.), 29 pp.

67. Ayers, Jerry B. and Janie Marie Evans. "Verbal Interaction Analysis Patterns in the Classrooms of Early Childhood Teachers." Presented before the Annual Meeting of the American Educational Research Association, Montreal, Canada, April 1983.

68. Ayers, Jerry B. Report 83-1. Multi-Cultural Survey of the Graduates of the Teacher Education Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1983. (mimeo.), 8 pp.

69. Ayers, Jerry B. Report 83-2. Tennessee Technological University Teacher Evaluation Model--Year X, Cookeville, TN: Tennessee Technological University, College of Education, 1983, 50 pp. ERIC Document No. 232 974.

70. Ayers, Jerry B. Report 83-3. A Report of Three Surveys of 1983 Graduates of the Teacher Preparation Program of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1983. (mimeo.), 17 pp.

71. Faculty, Department of Administration, Supervision and Curriculum. Follow-up Study of Graduates, Cookeville, TN: College of Education, Tennessee, 1983. (mimeo.), 21 pp.

72. Ayers, Jerry B. "Consistency of Teacher Behavior Across Time," Education, 103 (4):375-377, Summer 1983.

73. Ayers, Jerry B. "Verbal Behavior in Resource and Regular Elementary Classrooms," Exceptional Children, 50 (2):176-177, October 1983.

74. Ayers, Jerry B. "Authoritarianism and Teacher Effectiveness," Eastern Kentucky University Educational Review, 7 (2), 31-44, Spring 984.